

HENDERSON'S DICTIONARY OF  
Biological Terms

*Eleventh Edition*

Eleanor Lawrence



John Wiley & Sons, Inc.

## John Wiley &amp; Sons, Inc.

605 Third Avenue

New York, NY 10158-0012, USA

© Oliver and Boyd Limited 1963

© Longman Group UK Limited 1989

All rights reserved; no part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without either the prior written permission of the Publishers.

Originally published by Oliver and Boyd under the title  
*A Dictionary of Scientific Terms*

First edition 1920

Seventh edition 1960

First published under the title

*A Dictionary of Biological Terms*

Eighth edition 1963

Reprinted by Longman Group Limited 1975, 1976

Ninth edition 1979

Reprinted 1982

Reprinted in paperback 1985, 1986, 1987

Tenth edition 1989

Reprinted in paperback 1990

Eleventh edition 1995

Reprinted in paperback 1996

Library of Congress Cataloguing-In-Publication Data  
A catalogue entry for this title is available

from the Library of Congress

ISBN 0-470-23507-1

Produced by Longman Singapore Publishers (Pte) Ltd.

Printed in Singapore

## CONTENTS

Preface	v
Abbreviations	vii
Units and conversions	vii
SI prefixes	ix
Greek alphabet	ix
Common Latin and Greek noun endings	ix
THE DICTIONARY	1 - 647
Appendices	
1. Structural formulae	649
2. Outline of the Plant Kingdom	666
3. Outline of the Fungi (Kingdom Mycetae)	670
4. Outline of the Animal Kingdom	672
5. Outline of the Kingdom Protista	681
6. Outline of the Prokaryotes (Kingdom Prokaryotae)	683
7. Virus families	685
8. Etymological origins of some common word elements in biology	687

**BEST AVAILABLE COPY**

### **basal cell**

composed of microtubules. It organizes the assembly and arrangement of the microtubules of the axoneme. *alt.* basal granule. **basal cell** cell in lowest layer of a stratified tissue, such as epidermis and other epithelia, and from which that tissue is renewed; (*mycol.*) uninucleate cell which supports the dome and tip of a hyphal crozier; (*zool.*) contractile epithelial cell, as in coelenterates.

**basal disc** in corals, the area of ectoderm that secretes the calcareous skeleton; in hydra, lower end of body by which it attaches to substratum.

**basal ganglia** masses of grey matter in cerebral hemispheres which connect with other brain centres, involved in motor control.

**basal knobs** swellings or granules at points of emergence of cilia in ciliated epithelial cells.

**basal lamina** thin collagenous layer underlying many epithelia, forming part of the basement membrane separating the epithelial layer from underlying tissues; layer of extracellular matrix lying between nerve terminal and muscle membrane and surrounding muscle and nerve terminals.

**basal leaf** one of the leaves produced near base of stem, a radical leaf.

**basal metabolic rate** minimum metabolic rate required for survival, measured in humans at complete rest in a thermally neutral environment after fasting for 12 hours.  
**basal metabolism** normal state of metabolic activity of organism at rest.

**basal placentation** condition where ovules are situated at the base of the ovary.  
**basal plates** fused parachordal plates in developing skull; of placentae, outer wall of intervillous space; certain plates in echinoderms, situated at top of stalk in crinoids, in echinoids forming part of the apical disc.

**basal ridge** a ridge around base of crown in a tooth.

**basalar** *a. appl.* sclerites below the base of wing in insects.

**basale** *n.* bone of variable structure supporting fish fins.

**basapophysis** *n.* a transverse process arising from the ventrolateral side of a vertebra.

**base** *n.* a substance that accepts a  $H^+$  ion (proton) in solution; in biochemistry often refers to the nitrogenous bases, the purine and pyrimidine constituents of nucleotides

**base analogue** a substance chemically similar to one of the normal nucleotide bases and which is incorporated into DNA, often causing mutations.

**base exchange capacity** the extent to which exchangeable cations can be held in a soil. *alt.* cation exchange capacity.

**base pair (bp)** a single pair of complementary nucleotides from opposite strands of the DNA double helix. The number of base pairs is used as a measure of length of a double-stranded DNA.

**base pairing** weak bonding between purine and pyrimidine bases within nucleic acids, adenine pairing with thymine (in DNA) or uracil (in RNA) and cytosine with guanine (DNA and RNA).

**base ratio** the ratio of the bases (A+T)/(C+G) in DNA, which varies widely from species to species.

**base-rich** *a.* soils containing a relatively large amount of free basic ions such as magnesium or calcium.

**base sequence** *see* nucleotide sequence.  
**base sequencing** *see* DNA sequencing.  
**base substitution** replacement of one nucleotide with another in DNA

**basement membrane** layer separating many types of epithelia from underlying tissues, consisting of basal lamina, mucopolysaccharides and a fine fibrous meshwork.

**basibranchial** *n.* central ventral or basal skeletal portion of branchial arch

### **basibranchiostegal myohyal a.v.**

**basic** *a.* having the properties of a base; *appl.* stains which act in general on the nuclear contents of the cell; *appl.* number, (i) the minimum haploid chromosome number occurring in a series of euploid species in a genus, (ii) chromosome number in gametes of diploid ancestor of a polyploid organism; of soils, rich in alkaline minerals.

**basicranial** *a.* situated or relating to base of skull.

**basidia** *plu.* of **basidium** *q.v.*  
**basidiocarp** *n.* the fruiting body of  
basidiomycete fungi, which bears the  
basidia.

**Basidi-** gal p  
**basidi-**  
**Basid-** basi of fu their ducu born tures smut stool and t  
**basidic**  
**basidic** in ba basic  
**basidic** ally whic are f basic  
**basifu** acto<sup>g</sup>  
**basifu** soils.  
**basiga** and s sac, :  
**basihy** hyo<sup>k</sup>  
**basilat** labio  
**basilar**  
**basilar** gan c  
**basiler**  
**basilic** bice<sup>g</sup>  
**basilin** plate turk  
**basim-** head  
**basim-** head  
**basiny** of s<sup>g</sup> basic  
**basior** of th  
**basiope** in cr